Socio-economic conditions, inequality and deprivation in North East India

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Abstract: *In spite of ample natural and human resources, the north east region of India that consists of eight states is still lagging behind as compared to many states of India. People of these states are deprived in different socio-economic indicators. The aim of the paper is to examine the inequalities in socio-economic parameters of development, analyse inequality in the access to basic amenities, and quantify the level of facility and socio-economic deprivations. It was found that Multi-dimensional Poverty Index (MPI) value is highest in Assam but, inequality among the MPI Poor is high in Meghalaya. In 2011-12, BPL population was highest in Manipur (46.7 %) followed by Assam (40.9 %) and Arunachal Pradesh (37.4 %) exceeding the all India level (29.5). It was observed that inequality is high in growth rate of population (%) (among demographic indicators), Sanitation Facilities (among the indicators of economic conditions), Rail Density (among indicators of infrastructure), Average Years of Education, Per Capita Monthly Expenditure (Rs) and Population Below Poverty Line. Analysis of access to basic amenities, namely, drinking water, toilet facility and electricity reveals the existence of wide state-level variations. Inequality in access to electricity is highest in urban sector as compared to the rural sector among the three basic services. Among the states of NER, the maximum average deprivation in the basic facilities is located in Meghalaya and the most Socio-Economic deprived state is Nagaland. Thus, it is recommended for consistent and balanced development approach, expansion of capability, improvement in infrastructure and diversification of agriculture across the eight states of North East India.*

Key words: *Socioeconomic conditions, Poverty, Inequality, Deprivation, Basic facilities, North East India*

1.Introduction

The saying 'Southeast Asia begins where Northeast India ends' indicates the socio-cultural, genealogical, geographical and psychological bond or linkage of ethnic tribes of 'North East India' with 'South East Asia'. This north east region of India consisting of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura occupies

7.98 % of India's geographical area with 3.76 % of India's total population. The Northeast India constitutes 34% of the country's water resources and 40% of India's hydro power potential covering nearly 90% India's international boundaries. As per census 2011, Dibang valley district of Arunachal Pradesh has the lowest population (7,948) in the country. Serchhip district in Mizoram records at highest literacy rate of 98.76% among all India districts. Aizwal (Mizoram) is with highest literacy rate of 98.80% among the Indian cities.

Peter Townsend (2009:214), a pioneer on poverty and relative deprivation, defined 'Deprivation' as "a state of observable and demonstrable disadvantage, relative to the local community or the wider society or nation to which an individual, family or groups belong." He mentioned 'different forms' of deprivation as "lack the types of diet, clothing, housing, household facilities and fuel and environmental, educational, working and social conditions, activities and facilities ……. in the societies to which they belong" (Townsend, 1987:126). It means that 'deprivation' is multi-dimensional in the form of lack of basic necessities of diet or clothing, or by virtue of the poor environment or social conditions in which they live. Here, the term "deprivation" is used in place of "multiple deprivation" but focus is on the later. According to the World Bank (2000:15), "poverty is pronounced deprivation in wellbeing." Wellbeing is 'quality of life' that is measured by income, health, education, housing, assets, rights to speech etc. of an individual. For Townsend, the terms deprivation and poverty are two sides of the same coin. Deprivation (outcome) is the result of poverty (cause): "People are relatively deprived if they cannot obtain, at all or sufficiently, the conditions of life – that is, the diets, amenities, standards and services …….. If they lack or are denied resources to obtain access to these conditions of life and so fulfil membership of society, they may be said to be in poverty" (Townsend, 1993:36). Sen (2010:15-16) makes distinction between 'feelings of deprivation' and 'conditions of deprivation'. Peter Townsend (1974:25-26) said that 'the latter would be a better usage' and defined 'relative deprivation' as "situations where people possess less of some desired attribute, be it income, favourable employment conditions or power, than do others." Sen argued that "the choice of 'conditions of deprivation' cannot be independent of 'feelings of deprivation' (Sen, 2010:16) and "In the 'aggregation' exercise the magnitude of absolute deprivation may have to be supplemented by considerations of relative deprivation" (Sen, 2010:32). He said that "absolute deprivation in terms of a person's capabilities relates to relative deprivation in terms of commodities, income and resources" (Sen, 1983: 153).

Recent and ongoing work into absolute poverty by researchers in the Townsend Centre uses the human rights framework to develop a deprivation index measuring access to seven basic

needs: Clean water, Sanitation, Shelter, Education, Information, Food, and Health. If the household or individual does not have access to a particular basic need, they are defined as 'deprived'. Those who are deprived of two or more of the seven basic need indicators are defined as being in 'absolute poverty' (‘Defining and measuring poverty’, 2015).

The geographical location and lack of infrastructural development makes the NER states isolated with the rest of the country (Agnihotri, 2004; Kumar, 2004). So, it needs to work towards an integrated approach in transport, phone, irrigation and flood control, management of forest resources and supply of food and essential commodities (Agnihotri, 2004). In spite of immense natural and human resources, the NER is isolated geographically that has led to deprivation of economic development (Cappellari & Jenkins, 2006). Thus, the study on deprivation is not only crucial for the regional concern, but also important for establishment of equity toward balanced development across the nation (Bhattacharya & Wang, 2011:35).

2. Objective

The study is planned to examine the socio-economic conditions and their inequalities among the north-eastern states of India. Attempts have been made to analyse inequality in the access to basic amenities. It is tried to quantify the level of facility deprivation and socioeconomic deprivation.

3. Data and Methodology

The study is based on secondary sources of data. The data are collected from Central Electricity Authority (M/o Power), Railway Board (M/o Railways), Transport Research Wing (M/o Road Transport & Highways), Central Statistics Office (Ministry of Statistics & Programme Implementation), Office of the Registrar General and Census Commissioner (Ministry of Home Affairs), Ministry of Development of North Eastern Region, Ministry of Women and Child Development. To measure inequality we use Coefficient of Variation (CV), Gini Coefficient (Gini), and Concentration Coefficient (CC). Facility deprivation index (FDI) is used to measure deprivations in three basic facilities, namely supply of safe drinking water, electricity and sanitary facility. On the other hand, Socio-Economic Deprivation is constructed and calculated based on selected twenty socio-economic indicators: Per cent of Houseless Population, Per cent of Housing Shortage, Per cent of Slum Population, Poverty Rate, Rural Poverty, Urban Poverty, Unemployment Rate, Rural Unemployment Rate, Urban Unemployment Rate, Illiteracy Rate, Rural Illiteracy Rate, Urban Illiteracy Rate, Male Illiteracy Rate, Female Illiteracy Rate, Percent of Scheduled Caste Population to Total

Population, Percent of Scheduled Tribe Population to Total Population, Household Size, Size of Land Holdings in hectare, Population Growth and Population Density.

Gini Coefficient of Inequality is based on the Lorenz curve, a cumulative frequency curve that compares the distribution of a specific variable (e.g., income, expenditure, assets) with the uniform distribution that represents equality.

Formally, let x_i be a point on the x-axis, and y_i a point on the y-axis. Then,

$$\text{Gini}=1-\sum_{i=1}^{N}(x_i-x_{i-1})(y_i+y_{i-1}).$$

When there are N equal intervals on the x-axis, the equation simplifies to

$$\text{Gini}=1-\frac{1}{N}(y_i+y_{i-1}).$$ (Haughton and Khander,2010:104).

The paper uses *49th & 65th Round*sdata on housing conditions and amenities conducted in 2008-09 and 2012 by National Sample Survey Organization (NSSO), Ministry of Statistics and Programme Implementation**.** This study considers an indicator of residential crowding and three variables to represent household's access to basic amenities. The residential crowding is measured as per capita floor area in square feet. The variables representing basic amenities are drinking water, toilet facility and electricity. The concentration index estimates the degree of inequality by given a numeric measure of inequality. It is defined as twice the area between the concentration curve and the line of equality

$$C=\frac{2}{\mu}\text{cov}(h, r)$$

where

C = the concentration index,

h = the housing indicator variable,

r = the rank of the living standard variable and

μ = the average of the housing variable.

(Pal, Aneja & Nagpal, 2015: 5)

The term 'facility deprivation' is used to specify a particular dimension of deprivation. Thus, the composite index is termed as 'Facility Deprivation Index' (FDI) in respect of three basic facilities namely, supply of safe drinking water, electricity and sanitary facility. The source of data for the study is based on "Ranking and Mapping of Districts based on Socio-economic and Demographic Indicators" a report by Ram and Sekhar (2006), published by the International Institute of Population Studies, Mumbai. For this purpose, first, we are to

calculate deprivation indicator (DI). Then, we are to calculate Facility Deprivation Index (FDI). The Deprivation Indicator (DI) is measured as follows:

$$DI_{ijk} = \frac{\max(x_{...k}) - x_{ijk}}{\max(x_{...k}) - \min(x_{...k})}$$

Where,

DI_{ijk}= the deprivation indicator (DI) for the *k*th facility in the *j*th district of the *i*th state

$\max(x_{...k}) =$ the percentage of households in a given district which has the best coverage of the kth facility (k = 1, 2, 3) in entire nation.

$\min(x_{...k}) =$ the percentage of households in the district that has the worst coverage of the kth facility (k = 1, 2, 3) in theentire nation.

x_{ijk}= the percentage of households enjoying the *k*th facility in the *j*th district of the *i*th state

i= 1, 2, ..., 8 for those aforementioned eight states in NER

j= 1, 2, …,n_i for the number of districts in the *i*th state is represented by n_i,

k= 1, 2, 3 for the three basic necessities: safe drinking water (k =1), sanitary facility (k =2) and electricity supply (k =3)

The value of DI_{ijk} varies from zero to one, where the value of 1 implies that the given district is most deprived in comparison to the best district in the country in the kth facility. The reverse is true for a value of 0.

The weighted index of deprivation (facility deprivation index) for the jth district of the ith state is given by

$FDI_{ij}=W_1 \times DI_{ij\,1} + W_2 \times DI_{ij\,2} + W_3 \times DI_{ij\,3}$, $with\ \sum_{k=1}^{3} W_k=1$

Where,

W_k= the weight associated with the *k*th basic facility (k = 1, 2, 3)

(Bhattacharjee& Wang, 2011:38-39).

4. Results and Discussions

As per 2011 census, Sex ratio is highest in Manipur (992) followed by Meghalaya (989) and Mizoram (976) and lowest in Sikkim (890). Percentage of population live in rural area is highest in Assam (85.92) and lowest in Mizoram (48.49). Infant Mortality rate (Total) recorded highest in Assam (54) followed by Meghalaya (47) and Mizoram (35). It is lowest in Manipur (10).

A majority of India's population does not have access to sanitation facilities in their dwellings and lacks sanitation facilities. As per Census of India, if a household has access to

drinking water supplied from a tap or a hand pump/tube well situated within or outside the premises, it is considered as having access to safe drinking water. Millions of people in the country suffer from water borne diseases on account of lack of access to safe drinking water. It is the poor who suffer from higher prevalence of diseases compared to the rich (Nayak, 2013:5). Sanitation Facilities are high in Mizoram (91.91) followed by Manipur (89.30) and Sikkim (87.20); but, lowest in Arunachal Pradesh (61.97). Similarly, Sources of Drinking Water in rural (Tap and Tube well) records highest in Arunachal Pradesh (91.0) followed by Assam (71.7) and Tripura (71.1), but lowest in Mizoram (19.4).

Education is considered as a means to enhance capability, overcome constraints, enlarge choices, and power to cope with resilience for standard of living. It bridges the gaps in communication, and encourages people's participation in social and political life. The educational attainment has its positive impact on the people's wellbeing and changes the perceptions, aims, means and ability of an individual as well as community. It is the determining factor of formation and application of new technologies. It lowers infant mortality rates, improves the health of children and women; empowers weaker sections of society, increses social mobility and political freedom (Nayak, 2013:3-4). Mizoram is the state with highest literacy rate (91.33). Literacy rate of all north eastern states overcomes the all India level (74.04) except Arunachal Pradesh (65.38) and Assam (72.19).

Among the NE states, shares of services to Gross State Domestic Product (GSDP) are high. Next are industry and agriculture & allied sector. It is evident that Shares of Agriculture & allied sector, industry and services in GSDP are highest in Arunachal Pradesh (31.6), Sikkim (38.4) and Mizoram (59.8) respectively among the N E states.

In case of Infrastructure, Assam is leading ahead among the NE states. Access to electricity is a basic amenity and an index of industrialization (Nayak, 2013:5). The economic backwardness of the state is evident from her low per capita income. Per capita monthly consumption expenditure (PCMCE) is considered to be a better measure of economic well-being of people than that of per capita monthly income measure for many obvious reasons (Nayak, 2013:6). Per Capita Monthly Income is highest in Arunachal Pradesh (2272.58) and lowest in Assam (1398.50). In contrast, Per Capita Monthly Expenditure is high in Nagaland (1094.88) and lowest in Tripura (578.91).

Table 1 :Select Socio-economic indicators of North East India											
States	**Demographic**			**Health**			**Education**		**Economic conditions**		
	Sex ratio (2011)[1]	**Rural population (%) (2011)[1]**	**Growth rate of population (%) (2001-11)[1]**	**Infant Mortality rate (Total) (2013)[2]**	**Sanitation Facilities (2011)[3]**	**Sources of Drinking Water in rural (Tap and Tube well) (2008-09)[4]**	**Literacy rate (2011)[1]**	**Average Years of Education (2004-05)[5]**	**Share of Agriculture & Allied Sector in GSDP at current prices: 2011-12 (In % of GSDP) [6]**	**Share of Industry in GSDP at current prices: 2011-12 (In % of GSDP) [6]**	**Share of Services Sector in GSDP at current prices: 2011-12 (In % of GSDP) [6]**
1	2	3	4	5	6	7	8	9	10	11	12
Arunachal Pradesh	938	77.33	26.03	32	61.97	91.0	65.38	4.2	31.6	34.6	33.8
Assam	958	85.92	17.07	54	64.89	71.7	72.19	4.6	27.9	23.3	48.8
Manipur	992	69.79	12.05	10	89.30	35.1	79.21	6.3	24.7	29.7	45.6
Meghalaya	989	79.92	27.95	47	62.91	60.0	74.43	4.6	17.4	34.1	48.6
Mizoram	976	48.49	23.48	35	91.91	19.4	91.33	6.8	18.8	21.4	59.8
Nagaland	931	71.03	-0.58	18	76.52	33.8	79.55	7.1	23.8	20.3	56.0
Sikkim	890	75.03	12.89	22	87.20	67.4	81.42	4.4	10.8	38.4	50.7
Tripura	960	73.82	14.84	26	86.04	71.1	87.22	4.6	18.1	30.1	51.8
India	**940**	**68.84**	**17.64**	**40**	**46.92**	**84.8**	**74.04**	**4.7**	**17.2**	**26.4**	**56.4**

Source:1. Government of India, 2011; 2. SRS, 2014; 3. Measured in Percentage of Households. Govt. of India (2008-09) Housing Condition and Amenities in India (65th Round, NSSO Report No. 535); 4. Measured in Percentage of Households. Govt. of India (2008 & 1993) Housing Condition and Amenities in India, 65th& 49th Round NSSO Report Nos. 535 & 429 (July 2008 - June 2009 & Jan – June 1993).5. Govt. of India (2009) Gendering Human Development Indices; 6. Central Statistics Office, Ministry of Statistics & Programme Implementation.

Table 2: Infrastructure and Standard of living in North Eastern States						
States	**Infrastructure**				**Standard of living**	
	Per capita Consumption of electricity (kWh) (2011-12) [1]	**Rail Density [2] (per 1000 sq km) (As on 31st March,2012)**	**Share of Broad Gauge [3] (As on 31st March,2012)**	**Road Density [3] (per 1000 sq km) (As on 31st March,2012)**	**Per Capita Monthly Income (Rs) (2004-05)[4]**	**Per Capita Monthly Expenditure (Rs) (2004-05)[5]**
Arunachal Pradesh	683.13	0	0	178.88	2272.58	798.76
Assam	249.82	31	60	3623.65	1398.50	613.67
Manipur	235.86	0	0	862.27	1543.92	643.62
Meghalaya	667.57	0	0	539.61	1982.75	762.26
Mizoram	506.74	0	0	535.70	2055.17	993.72
Nagaland	257.18	1	87	2122.50	1686.17	1094.88
Sikkim	886.36	0	0	791.43	2224.42	738.52
Tripura	253.82	14	0	2789.24	2032.83	578.91
India	**883.63**	**20**	**87**	**1206.29**	**2011.92***	**700.33**

Source: CSO, 2014: 40-61

1. All India Electricity Statistics, Central Electricity Authority, M/o Power;
2. Railway Board, M/o Railways
3. Basic Road Statistics, Transport Research Wing, M/o Road Transport & Highways
4. CSO, State Domestic Product, Ministry of Statistics & Programme Implementation.
5. NSS 38th, 50th, 55th & 61st Round on Household Consumption Expenditure.* The figure pertains to Net National Income (NNI).

Multi-dimensional Poverty Index (MPI) value is highest in Assam (0.316) followed by Meghalaya (0.307) exceeding the all India level (0.283) and lowest in Mizoram (0.094). Inequality among the MPI Poor is high in Meghalaya (0.248) followed by Arunachal Pradesh (0.237) overcoming the all India level of inequality (0.234). In 2011-12, BPL population (as per Rangarajan Methodology) was estimated at highest in Manipur (46.7 %) followed by Assam (40.9 %) and Arunachal Pradesh (37.4 %) exceeding the all India level (29.5).

Table 3:Multi-dimensional Poverty Index and Population Below Poverty Line by States - 2011-12

Region	Multi-dimensional Poverty Index (MPI)^					Population Below Poverty Line by States - 2011-12 (Rangarajan Methodology)*
	MPI (H x A)	H (Incidence) k ≥ 33.3%	A (Intensity)	Inequality Among the MPI Poor	Population Share	%age of Persons
India	**0.283**	**53.7%**	**52.7%**	**0.234**	**100%**	**29.5**
Urban	**0.116**	**24.6%**	**47.2%**	**-**	**30.6%**	**26.4**
Rural	**0.357**	**66.6%**	**53.6%**	**-**	**69.4%**	**30.9**
Arunachal Pradesh	0.274	53.0%	51.7%	0.237	0.1%	37.4
Assam	0.316	60.1%	52.6%	0.213	2.7%	40.9
Manipur	0.191	40.8%	46.7%	0.154	0.2%	46.7
Meghalaya	0.307	56.6%	54.3%	0.248	0.3%	24.4
Mizoram	0.094	21.0%	44.7%	0.113	0.1%	27.4
Nagaland	0.264	51.7%	51.1%	0.201	0.1%	14.0
Sikkim	0.150	31.8%	47.0%	0.167	0.1%	17.8
Tripura	0.269	54.6%	49.3%	0.188	0.3%	24.9

Source: ^OPHI, 2014:5;#Planning Commission, 2014: 66; All India estimate includes all States/UT's. Population as on 1st March 2012 has been used for estimating number of persons below poverty line. (2011 Census population extrapolated)

Table 4 & Table 5 reports the results of Coefficient of Variation (CV), Gini Coefficient (Gini)and Concentration Coefficient (CC) of Demography, Health, Economic conditions, Infrastructures, Education and Standard of living in NE India. It was observed that inequality is high in growth rate of population (%) (among demographic indicators), Sanitation Facilities (among the indicators of economic conditions), Rail Density (among indicators of infrastructure), Average Years of Education, Per Capita Monthly Expenditure (Rs) and Population Below Poverty Line.

Table 6 shows mean per capita floor area across the north eastern States and inequality within North-eastern states. In 2012, Arunachal Pradesh reports the highest average per capita

Table 4: Coefficient of Variation (CV), Gini Coefficient (Gini)and Concentration Coefficient (CC) of Demography, Health, Economic conditions and Infrastructures in NE India															
Demography	**Coefficients**			**Health**	**Coefficients**			**Economic conditions**	**Coefficients**			**Infrastructure**	**Coefficients**		
	CV	**Gini**	**CC**		**CV**	**Gini**	**CC**		**CV**	**Gini**	**CC**		**CV**	**Gini**	**CC**
Sex ratio	0.036	0.018	0.021	Infant Mortality rate	0.483	0.255	0.291	Share of Agriculture & Allied in GSDP	0.306	0.160	0.184	Per capita Consumption of electricity	0.545	0.274	0.313
Rural population (%)	0.152	0.071	0.082	Sanitation Facilities	0.163	0.084	0.096	Share of Industry in GSDP	0.231	0.121	0.139	Rail Density (per 1000 sq km)	1.965	0.788	0.901
Growth rate of population (%)	0.553	0.274	0.313	Sources of Drinking Water	0.431	0.224	0.256	Share of Services Sector in GSDP	0.156	0.078	0.089	Road Density (per 1000 sq km)	0.877	0.439	0.502

Source: Calculated by the author

Table 5: Coefficient of Variation (CV),Gini Coefficient (Gini) and Concentration Coefficient (CC) of Education and Standard of living in NE India											
Education	**Coefficients**			**Standard of living**	**Coefficients**			**Poverty**	**Coefficients**		
	CV	**Gini**	**CC**		**CV**	**Gini**	**CC**		**CV**	**Gini**	**CC**
Literacy rate	0.105	0.055	0.062	Per Capita Monthly Income (Rs)	0.168	0.088	0.100	MPI	0.341	0.174	0.199
Average Years of Education	0.224	0.110	0.125	Per Capita Monthly Expenditure (Rs)	0.235	0.120	0.138	Population Below Poverty Line	0.392	0.206	0.236

Source: Calculated by the author

floor area at 195.1 sq.ft. followed by Assam (143.9 sq. ft.) and Manipur (129.2 sq.ft.); and lowest in Meghalaya (90.1 sq.ft.) in rural areas. But, inequality in rural areas is highest in Mizoram (0.164) followed by Sikkim (0.157), and Assam (0.147); and lowest in Manipur (0.078) in 2012. In 2012, the average per capita floor area in the rural sector is the highest in Manipur (169.8) followed by Arunachal Pradesh (134.2); but inequality is concentrated in Sikkim (0.198) followed by Tripura (0.172).

Table 6: Inequality in Per Capita Floor Area across N E States

States	**Rural**				**Urban**			
	2008-09		**2012**		**2008-09**		**2012**	
	Mean	**CI**	**Mean**	**CI**	**Mean**	**CI**	**Mean**	**CI**
Arunachal Pradesh	122.8	0.192	195.1	0.115	95.9	0.091	134.2	0.141
Assam	129.2	0.121	143.9	0.147	163.9	0.110	112.5	0.085
Manipur	141.7	0.088	129.2	0.078	160.8	0.024	169.8	0.072
Meghalaya	93.0	0.123	90.1	0.146	126.9	0.220	116.1	0.129
Mizoram	103.0	0.155	95.9	0.164	126.2	0.148	104.3	0.151
Nagaland	99.8	0.067	90.6	0.082	108.8	0.103	126.6	0.095
Sikkim	126.5	0.163	109.4	0.157	162.5	0.161	107.0	0.198
Tripura	101.3	0.145	102.7	0.111	123.4	0.174	134.1	0.172
India	**105.39**	**0.184**	**106.0**	**0.191**	**125.94**	**0.230**	**124.9**	**0.227**

Source: Pal, Aneja, & Nagpal, 2015:17-22

In 2012, Sikkim reports the highest availability with 0.800 percent of households and Manipur reports the lowest availability with 0.091percent of households having access to drinking water in rural sector. But inequality in rural sector is high in Manipur with 0.352 concentration index value and lowest in Assam (0.041) and Meghalaya (0.040). But, in urban sector Sikkim which has highest percent of households (0.961) having access to drinking water, also suffers from high level (0.692) of inequality. Similarly, percentage of households

Table 7: Inequality in Access to Drinking Water across N E States

States	**Rural**				**Urban**			
	2008-09		**2012**		**2008-09**		**2012**	
	Mean	**CI**	**Mean**	**CI**	**Mean**	**CI**	**Mean**	**CI**
Arunachal Pradesh	0.564	0.111	0.436	0.238	0.828	0.348	0.935	0.510
Assam	0.644	0.318	0.797	0.041	0.879	0.262	0.897	0.428
Manipur	0.217	0.145	0.091	0.352	0.494	0.489	0.381	0.278
Meghalaya	0.158	0.263	0.231	0.040	0.801	0.433	0.733	0.443
Mizoram	0.128	0.599	0.184	0.324	0.689	0.360	0.821	0.480
Nagaland	0.594	0.167	0.332	0.143	0.639	0.000	0.843	0.560
Sikkim	0.626	0.105	0.800	0.167	0.968	0.130	0.961	0.692
Tripura	0.345	0.382	0.307	0.091	0.784	0.558	0.590	0.311
India	**0.394**	**0.255**	**0.443**	**0.176**	**0.717**	**0.390**	**0.721**	**0.281**

Source: Pal, Aneja, & Nagpal, 2015:17-22

having access to drinking water is the lowest in Manipur with lowest level (0.278) of inequality.(See Table 7).

Nagaland is the highest performers with 0.990 percent of households reporting access to toilet facilities and Arunachal Pradesh is the worst performer with 0.603 percent of households reporting access to toilet facilities in 2012 (rural sector). In contrast, inequality is high in Manipur (0.413) and low in Arunachal Pradesh (-0.005) and Meghalaya (-0.198). Percentage of households having access to toilet facilities are the highest in Manipur (0.976) with lowest level (0.451) of inequality in urban sector in 2012.(See Table 8).

Table 8: Inequality in Access to Toilet Facilities across N E States

States	**Rural**				**Urban**			
	2008-09		**2012**		**2008-09**		**2012**	
	Mean	**CI**	**Mean**	**CI**	**Mean**	**CI**	**Mean**	**CI**
Arunachal Pradesh	0.821	-0.006	0.603	-0.005	0.996	0.320	0.923	0.725
Assam	0.858	0.374	0.846	0.135	0.975	0.444	0.932	0.675
Manipur	0.984	0.364	0.983	0.413	1.000	-	0.976	0.451
Meghalaya	0.886	0.226	0.953	-0.198	0.998	0.263	0.880	0.544
Mizoram	0.988	0.470	0.983	0.090	1.000	-0.549	0.817	0.662
Nagaland	0.956	0.517	0.990	0.200	0.957	0.353	0.811	0.722
Sikkim	0.975	0.335	0.983	0.034	0.984	0.720	0.723	0.455
Tripura	0.963	0.276	0.849	0.011	0.991	0.748	0.888	0.769
India	**0.336**	**0.413**	**0.390**	**0.437**	**0.822**	**0.520**	**0.854**	**0.540**

Source: Pal, Aneja, &Nagpal, 2015:17-22

In 2012, Nagaland is the best performer state (0.997) with highest inequality (0.514) in terms of electricity connections. On the other hand, Arunachal Pradesh is the lowest performer state (0.667) with lowest inequality (-0.100) in rural sector. Percentage of household having access to electricity is high (1.00) in Mizoram and Sikkim. Inequality is also high in Mizoram (0.998). Here, the availability of electricity is measured based on households having electricity connections, without considering the actual supply of electricity to households due to lack of data.(See table 9).

Analysis of access to basic amenities, namely, drinking water, toilet facility and electricity reveals the existence of wide state-level variations. Access to the basic amenities is concentrated in the rich states and inequality is more in the urban sector as compared to the rural sector. The basic services are unequally distributed, particularly in the rural sector as compared to urban areas. There are fluctuations in inequality over the years in

the three basic services. Inequality in access to electricity is highest in urban sector as compared to the rural sector among the three basic services.

Table 9: Inequality in Access to Electricity across N E States								
States	**Rural**				**Urban**			
	2008-09		**2012**		**2008-09**		**2012**	
	Mean	**CI**	**Mean**	**CI**	**Mean**	**CI**	**Mean**	**CI**
Arunachal Pradesh	0.779	0.108	0.667	-0.100	0.985	0.146	0.981	0.251
Assam	0.403	0.424	0.708	0.350	0.946	0.510	0.989	0.852
Manipur	0.869	0.370	0.948	0.152	0.995	0.619	0.994	0.531
Meghalaya	0.698	-0.190	0.796	0.389	0.993	0.701	0.983	0.581
Mizoram	0.819	0.462	0.908	0.413	0.998	-0.287	1.000	0.998
Nagaland	0.990	-0.533	0.997	0.514	1.000	-	0.995	0.211
Sikkim	0.958	0.313	0.991	0.308	0.994	0.209	1.000	-
Tripura	0.661	0.385	0.898	0.157	0.953	0.747	0.989	0.660
India	**0.660**	**0.353**	**0.800**	**0.377**	**0.961**	**0.641**	**0.980**	**0.667**

Source: Pal,Aneja, &Nagpal, 2015:17-22

Table 10 contains illustrations of Average Facility Deprivation Index (FDI) and Socio-Economic Deprivation. Among the states of NER, the maximum average deprivation in the basic facilities is located in Meghalaya (0.6009) followed by Assam (0.5387). The average value of the facility deprivation index is least (0.353) in Sikkim, which implies that the state has minimum deprivation in basic facilities.

Table 10: Average Facility Deprivation Index (FDI) and Socio-Economic Deprivation		
State	**Average Facility Deprivation Index (FDI) of the state (2006) @**	**Socio-Economic Deprivation (2001) #**
Arunachal Pradesh	0.3876	0.110
Assam	0.5387	0.132
Manipur	0.4533	-0.292
Meghalaya	0.6009	0.020
Mizoram	0.3874	-0.633
Nagaland	0.3971	0.369
Sikkim	0.353	-0.220
Tripura	0.4375	-0.394
North East India	**0.4609**	**-**

Source:@ Bhattacharjee& Wang, 2011:41. It is calculated in terms of three basic facilities namely, supply of safe drinking water, electricity and sanitary facility.

Khan, Shamshad, & Hassan, 2012:130. Calculation is based on State Level Published Data, Census of India, 2001.

In the entire NER, the least deprived state in terms of Socio-Economic conditions is Mizoram and the most Socio-Economic deprived state is Nagaland. The states with mean Z-Score values above 0.500 are categorized under the high level of socio-economic deprivation. The states included in this category are Assam and Meghalaya. The mean Z-Score values of medium category ranges from 0.500 to -0.500 score. Remaining six states are included in this category. The states scoring the mean Z-Score values of less than -0.500, are grouped under low level of socio-economic deprivation. No state is in this category.

5. Summary and Conclusions

In spite of ample natural and human resources, the north east region of India that comprises eight states is still lagging behind as compared to many states of India. People of these states are deprived in many socio-economic indicators. It is an important input to the production process and raises the productivity of other sectors.

Multi-dimensional Poverty Index (MPI) value is highest in Assam but, inequality among the MPI Poor is high in Meghalaya. In 2011-12, BPL population was highest in Manipur (46.7 %) followed by Assam (40.9 %) and Arunachal Pradesh (37.4 %) exceeding the all India level (29.5). It was observed that inequality is high in growth rate of population (%) (among demographic indicators), Sanitation Facilities (among the indicators of economic conditions), Rail Density (among indicators of infrastructure), Average Years of Education, Per Capita Monthly Expenditure (Rs) and Population Below Poverty Line. Analysis of access to basic amenities, namely, drinking water, toilet facility and electricity reveals the existence of wide state-level variations. Access to the basic amenities is concentrated in the rich states and inequality is more in the urban sector as compared to the rural sector. The basic services are unequally distributed, particularly in the rural sector as compared to urban areas. There are fluctuations in inequality over the years in the three basic services. Inequality in access to electricity is highest in urban sector as compared to the rural sector among the three basic services. Among the states of NER, the maximum average deprivation in the basic facilities is located in Meghalaya (0.6009) followed by Assam (0.5387). In the entire NER, the most Socio-Economic deprived state is Nagaland. Thus, it is recommended for consistent and balanced development approach across the eight states. ‘Human development’ (that is, well-being of people as an ends of development) should be focused in place of ‘human resource development’ (where human beings merely are considered as a means to a greater output and treats people as "human capital“). Initiatives should be taken to expand capabilities

(opportunity freedoms) and to support people's agency (process freedom) among weaker sections of backward regions. Government should focus on economic infrastructure (transport, communication and energy), social infrastructure (education, health, housing, water supply, sanitation), and diversification of agriculture, such as diversification of crops (shifting from single cropping system to multiple cropping) and diversification of productive activity (divert resources from farm to non-farming activities like livestock, fisheries etc.).

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